

THE FACTS

Information About
Environmental Cleanup
at McClellan AFB
July 1998

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Number 26

McClellan Air Force Base Completes Design of Phase 2 of the Groundwater Containment Remedy

Introduction

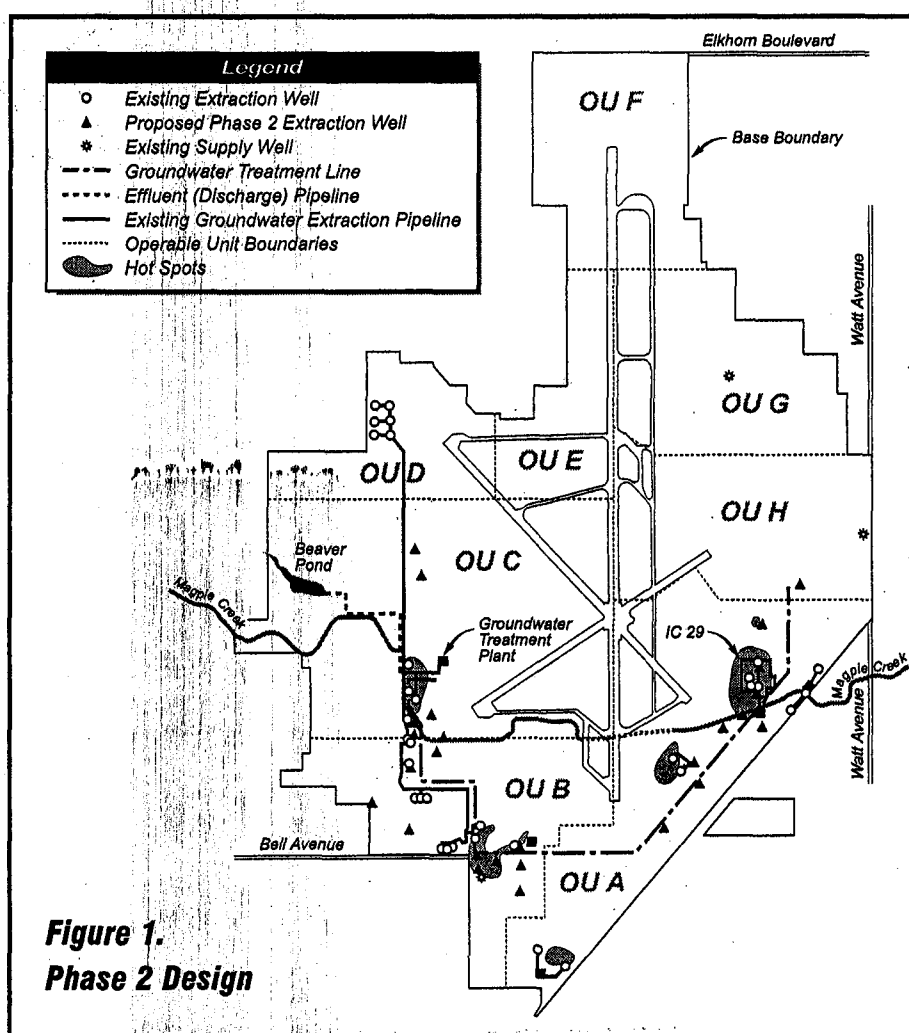
The McClellan AFB Environmental Management Directorate wishes to inform the community of the completion of the second design phase used in the remedy to contain contaminated groundwater above maximum contaminant levels (MCLs). This fact sheet provides background on the groundwater containment effort at McClellan AFB, details of the design, as well as contacts for further information.

Background

The groundwater Interim Record of Decision signed in 1995 is an agreement between the federal and state regulatory agencies and the Air Force on a selected interim remedy for contaminated groundwater at McClellan AFB. The selected remedy will contain and remove groundwater that is contaminated at levels above the MCLs. Containment prevents exposure to human health and environmental receptors. The interim remedy is to be executed in a three phased approach. Each phase builds upon the data and performance from the previous remedial actions so that more informed decisions are made.

Groundwater Cleanup Phases

The Phase 2 design evaluated the results of Phase 1 and then determined where more extraction systems and more information were needed. Extraction wells were arranged to completely contain all the known hot spots and monitoring wells were designated in areas requiring more information concerning the groundwater contamination. The expected flows and concentrations of groundwater from the new extraction wells were estimated to determine what treatment would be required. If the contaminant concentrations were predicted to be low, the Phase 2 design places the groundwater directly into one of two groundwater pipelines. If the contaminant concentrations were expected to be high, pretreatment units were



designed prior to placement of the contaminated groundwater into the pipelines. These groundwater pipelines all lead to the groundwater treatment plant (GWTP).

The capacity and primary water treatment method at the GWTP were modified as part of the Phase 2 design to handle the additional flow from the two groundwater pipelines. Once the additional Phase 2 wells (26 extraction wells) are in place, the flow to the GWTP will increase to about 1,400 gallons per minute (gpm). The Phase 2 GWTP modifications will provide a capacity to treat up to 2,000 gpm. This extra capacity will handle the additional flow expected from Phase 3, and any additional flow from the final groundwater remedy. As with Phase 1 GWTP operations, after final treatment, water is discharged to Magpie Creek.

Highlights of the Phase 2 Design by Operable Unit

McClellan is divided into 11 operable units (OUs) to help coordinate investigation and cleanup (called remedial) activities (See Figure 1). The Groundwater OU is all the groundwater beneath the base as well as contaminated groundwater that has moved beyond the base boundaries.

Operable Unit A

One pretreatment unit for contaminated groundwater was expanded for flows from the new extraction wells near Investigation Cluster 29 (IC 29) in OU A. The discharge from this pretreatment unit will be sent through the groundwater pipelines and routed to the GWTP. The expected total flow rate from IC 29 will be about 140 gpm. Three existing pretreatment units in OU A will be eliminated. These treatment

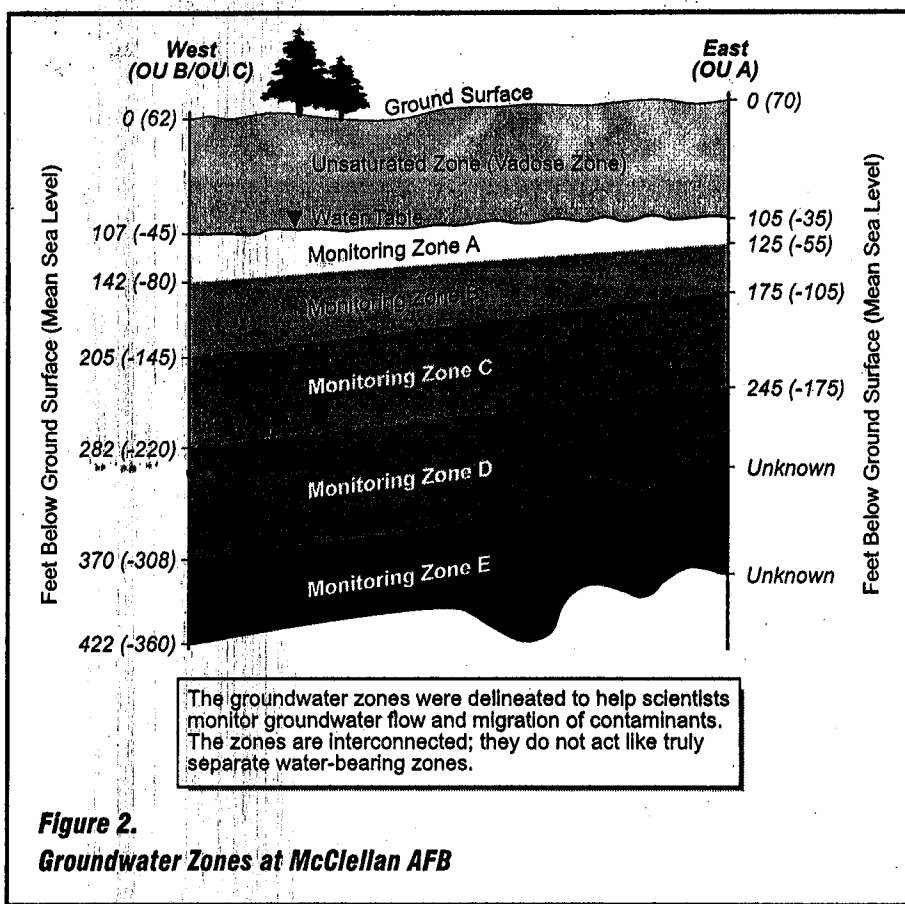
units currently discharge to the sanitary sewer. As part of the Phase 2 design, the groundwater for the extraction wells associated with these three treatment units will discharge directly to the groundwater pipeline. The total flow rate from the extraction wells associated with these three treatment units is expected to be about 40 gpm. Nine new extraction wells were designed for areas in OU A that require additional pumping to capture contaminated groundwater from the A and B groundwater zones (see Figure 2). The total flow rate from the new extraction wells is expected to be about 160 gpm.

Operable Unit B

Eleven new extraction wells were designed for areas in OU B that require more pumping to capture contaminated groundwater from the A, B, and C zones. The total flow rate from the new extraction wells is expected to be about 300 gpm. One treatment unit will be eliminated. Again, the flow from the extraction well associated with this treatment unit will discharge directly into the groundwater pipeline for treatment at the GWTP. Also, Base Well 18, a base drinking water supply well, will be shut down because it will no longer be needed for plume containment. Base Well 18 currently contains the groundwater from migrating off-base; however, it draws contamination deeper. This containment will be provided by two shallower extraction wells.

Operable Unit C

Six new extraction wells were designed for areas in OU C that require more pumping to capture contaminated groundwater from the A zone. The total flow rate from the new extraction wells is expected to be about 120 gpm.



Groundwater Treatment Plant

The Phase 2 design doubles the existing GWTP capacity and employs air stripping to more cost effectively treat the contaminated groundwater. The off-gas from the air stripping process will be treated using flameless oxidation. The existing carbon treatment units will be retained and used as a final cleaning step in the groundwater treatment process, further ensuring compliance with water discharge quality standards.

Summary

McClellan's commitment to the community to protect the public health and environment continues with the completion of the GWOU Phase 2 Remedial Design. Construction begins this fall and completes containment of the known hot spots, further contains areas above MCLs

from migrating off base and collects groundwater information needed to complete the final remedy.

How can I review documents?

Final Design documents are available for review along with other related cleanup documents at:

McClellan AFB Administrative Record
5050 Dudley Blvd., Suite 3
(Bldg. 269D)
(916) 643-1742, ext. 347

Who do I call with questions or concerns?

Merianne Briggs
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